UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,664	10/13/2006	Bob Coyne	14923.0036	5246

27890 7590 07/22/2011

STEPTOE & JOHNSON LLP
1330 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER	
PADEN, CAROLYN A	

ART UNIT	PAPER NUMBER
1781	

MAIL DATE	DELIVERY MODE
07/22/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/568,664	COYNE ET AL.	
	Examiner	Art Unit	
	CAROLYN PADEN	1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 July 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25,27,28,32-45 and 62* is/are pending in the application.

4a) Of the above claim(s) *46-57* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25,27,28,32-45 and 62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The final rejection has been withdrawn in response to applicants' arguments and prosecution of this application continues.

Claims 1-25, 27-28, 32-45 and 62 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Examiner cannot find support in the Specification or original claims for the specific melting point of the hydrophobic shell that is set forth in claim 1.

Applicants' arguments with regard to the rejection of the claim over Morgan under 35 USC 102 or 103 are persuasive. Accordingly this rejection has been withdrawn.

Claims 1, 2, 4, 8-16, 18-25, 27-28, 32, 37, 39-43, 45 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan (5,204,029) as further evidenced by Francis taken with Merck.

Morgan discloses encapsulating liquids in fatty matrices. Here a shell of fats is prepared. The fats are solid fats having a melting point of 110F to

195F, as required in claim 1 (column 4, lines 63-64). The fats can be selected from any of the fats shown at column 3, lines 39-60. These fats and oils are generally known in the art to be triglycerides. The materials in the core can include any of a variety of ingredients shown in column 5. Antimicrobial agents and antimycotic agents are especially mentioned at column 5, lines 38-39. Sorbic acid is specifically mentioned in Morgan as an antimicrobial agent. Francis is further relied upon to show that sorbic acid is effective against bacteria such as the bacteria of claim 11. Merck is cited to show that sorbic acid appears to be stable at temperatures below 228F. The shell selected is a triglyceride shell and would be expected to have all of the properties of the claims. The claims appear to differ from Morgan in the recitation of an example where an anti-microbial agent is used as a core. Given the wide variety of choices of cores available at column 5, it would have been obvious to encapsulate an antimicrobial agent for use in food as an obvious way to enhance the shelf-life of the food. Water would be expected to be the carrier for the core ingredients (column 5, line 2). It is appreciated that the density of the carrier is not mentioned but no unobvious or unexpected difference is seen between the densities of the ingredients in Morgan since the carrier appears to be water.

No unobvious or unexpected result is seen from the selection of brominated oil as an oil source in Morgan. It is appreciated that the particle size of the encapsulated material is not mentioned. Morgan mentions a particle size of 425 microns in example 1 in free flowing powder form. No unobvious or unexpected result is seen from the difference in the particle size of Morgan versus that of the claims because the final product is still in particulate form. The uses of emulsifying agents are contemplated in Morgan at column 5, lines 50-56. No unobvious or unexpected difference is seen from the pressure of claim 19 and injection of claim 20 on the shell of Morgan versus the shell of the claims.

Applicants' arguments concerning the rejection of the claims over Morgan under 35 USC 103 have been considered but do not overcome the rejections. Morgan provides for a solid fat with a melting temperature exceeding 43C (column 4, lines 62-68). One of ordinary skill in the art would expect the shell of Morgan to have the heat degradation properties of the claim because antimicrobial material is made from the same components as that shown in the claim. Applicants' sausage sample at page 65, cited for evidence in support of the claims, uses triglyceride with a melting point of 85C. One of ordinary skill in the art, when selecting

microcapsules for use at elevated temperatures, would be expected to select a triglyceride with a high melting point in order maintain the anti-microbial material within the encapsulated shell.

The rejection of the claims over Morgan in view of Francis (nisin citation) has been withdrawn.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan as applied to the claims above, and further in view of Amankonah (5,516,543).

The claims appear to differ from Morgan in the recitation of the inclusion of Xanthan gum. Amankonah teaches that gellan gum modified with Xanthan gum and coated with fat can be used for its texture as a fat replacer or fat extender (abstract, column 2, line 42 and column 3, lines 1-6). In example 1, anti-mycotic agents are added to the gellan solution before adding the oil in the preparation of the microparticles. It would have been obvious to one of ordinary skill in the art to include gellan gum and Xanthan gum in the encapsulated products of Morgan to optimize the taste or texture of the encapsulated antimicrobial material.

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 does not further limit claim 1 because the shell would not be expected to prevent degradation in of food, when heated, if the antimicrobial is released on contact with food.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 8-12, 17, 25, 27, 28, 37 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Berggren (0687417).

Berggren discloses inhibition of bacterial growth in meat products with an encapsulated product in particulate form comprising capsules containing acetic acid with fat (abstract). The melting point of the fat is stated to fall within the range of the claims (page 3, lines 1-7). The

encapsulated product is added to ham with brine, which examiner takes to be a marinade in example 1.

Applicants' arguments with respect to Berggren have been considered but do not overcome the rejections. Applicant argues that Berggren does not show a shell that prevents heat degradation of the antimicrobial material when heated to 60C. This is disagreed with. In example 1 the encapsulated antimicrobial is added to the meat before it is cooked at up to 78C (top of page 4). The final products were still found to be protected against microbial infestation. One would expect the shell of composition of Berggren to have protected the antimicrobial composition from heat degradation as a result of processing.

Claims 1, 2, 8-12, 17, 25, 27, 28, 33-37 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berggren (0687417).

Berggren discloses inhibition of bacterial growth in meat products with an encapsulated product in particulate form comprising capsules containing acetic acid with fat (abstract). The melting point of the fat is stated to fall within the range of the claims (page 3, lines 1-7). The encapsulated product is added to ham with brine, which examiner takes to be a marinade in example 1. The claims appear to differ from Berggren in

the recitation of the inclusion of a chelator in the encapsulated antimicrobial material. Berggren contemplates including citric acid in the encapsulate at page 2, lines 48-49 and applicant defines citric acid as a chelator in claim 34. Although the extent of antimicrobial activity is not mentioned, organic acids are known in the art to possess antimicrobial activity (page 2, lines 10-14 of Berggren). It would have been obvious to one of ordinary skill in the art to expect the citric acid in the encapsulate composition of Berggren to provide antimicrobial activity to the encapsulate composition of Berggren.

Applicants' arguments with respect to Berggren have been considered but do not overcome the rejections. Applicant argues that Berggren does not show a shell that prevents heat degradation of the antimicrobial material when heated to 60C. This is disagreed with. In example 1 the encapsulated antimicrobial is added to the meat before it is cooked at up to 78C (top of page 4). The final products were still found to be protected against microbial infestation. One would expect the shell of composition of Berggren to have protected the antimicrobial composition from heat degradation as a result of processing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn A Paden whose telephone number is (571) 272-1403. The examiner can normally be reached on Monday to Friday from 7 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached by dialing 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Carolyn Paden/

Primary Examiner 1781

.

.